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May 3, 2012

Reference No. 034891

Mr. William J. Ryan  
U.S. Environmental Protection Agency  
77 West Jackson Boulevard (SR-5J)  
Chicago, Illinois 60604

**VIA U.S. MAIL**

Dear Mr. Ryan:

Re: Remedial Action Completion and Certification Report  
Evergreen Manor Site  
Roscoe, Illinois

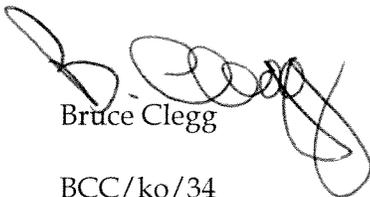
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In accordance with Section XIV 'Certification of Completion' of the "Consent Decree for Remedial Action and Cost Recovery" (Consent Decree) for the Evergreen Manor Site, please find the signed original and one copy of the document entitled "Remedial Action Completion and Certification Report". This document demonstrates and certifies that the remedial action has been completed in full satisfaction of the requirements of the Consent Decree.

As always, please contact me if you have questions.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES



Bruce Clegg

BCC/ko/34  
Attachment

cc: Erin Rednour, Illinois EPA (electronic version)  
John Matson, U.S. EPA (electronic version)  
Winnebago County Health Department  
Winnebago County Regional Planning and Economic Development Department



# REMEDIAL ACTION COMPLETION AND CERTIFICATION REPORT

EVERGREEN MANOR SITE  
ROSCOE TOWNSHIP, WINNEBAGO COUNTY, ILLINOIS

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**MAY 2012**  
**REF. NO. 034891 (10)**

**Prepared by:**  
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TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION AND BACKGROUND .....	1
1.1 DESCRIPTION OF THE REMEDIAL ACTION.....	2
1.2 GROUNDWATER MONITORING PROGRAM.....	2
2.0 CHRONOLOGY OF THE REMEDIAL ACTIONS.....	4
3.0 DISCUSSION OF THE ANALYTICAL DATA COLLECTED DURING THE REMEDIAL ACTION .....	6
4.0 SITE CLOSURE ACTIVITIES .....	8
5.0 CERTIFICATION.....	9
6.0 CONTACTS .....	10

LIST OF FIGURES  
(Following Text)

FIGURE 1.1	SITE LOCATION
FIGURE 1.2	MONITORING WELL LOCATIONS - GROUNDWATER MONITORING PROGRAM
FIGURE 3.1	DETECTED ANALYTICAL DATA - GROUNDWATER MONITORING PROGRAM

LIST OF TABLES

TABLE 3.1	DETECTED GROUNDWATER ANALYTICAL DATA - GROUNDWATER MONITORING PROGRAM WELLS
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LIST OF APPENDICES

APPENDIX A	TABLE 1 FROM THE 2004 SOW - CLEANUP STANDARDS FOR GROUNDWATER
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## LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Administrative Order on Consent
Consent Decree	Consent Decree for Remedial Action and Cost Recovery
CRA	Conestoga-Rovers & Associates
FSP	Field Sampling Plan
HASP	Site Health and Safety Plan
IAC	Illinois Administrative Code
ILEAP	Illinois Environmental Accreditation Program
Illinois EPA	Illinois Environmental Protection Agency
MCL	Maximum Contaminant Level
MNA	Monitored Natural Attenuation
MS/MSD	matrix spike/matrix spike duplicate
PCE	tetrachloroethene
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RACCR	Remedial Action Completion and Certification Report
RAWP	Remedial Action Work Plan
RD Report	Remedial Design Report
RD Work Plan	Remedial Design Work Plan
ROD	Record of Decision
Site	Evergreen Manor Site
SOW	Statement of Work
TCE	trichloroethene
TCL	Target Compound List
TestAmerica	TestAmerica Laboratories, Inc.
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

## 1.0 INTRODUCTION AND BACKGROUND

This “Remedial Action Completion and Certification Report” (RACCR) has been prepared by Conestoga-Rovers & Associates (CRA) on behalf of the Settling Defendants for the Evergreen Manor Site (Site) located in Roscoe Township, Winnebago County, Illinois. This report documents the completion of the remedial actions and has been prepared in accordance with Section XIV – ‘Certification of Completion’ of the “Consent Decree for Remedial Action and Cost Recovery” (Consent Decree), which became effective on February 26, 2009.

The Site is located in unincorporated Roscoe Township in Winnebago County, Illinois, just north of Roscoe, Illinois (Figure 1.1). Roscoe is in north-central Illinois, about 10 miles north of Rockford, Illinois. The CERCLIS identification number for the Site is ILD984836734. The Site has historically extended from an industrial area near Route 251 and Rockton Road about two miles southwest through the Hononegah Heights, Tresemer, Old Farm, and Evergreen Manor subdivisions. Between the industrial area and the residential area is about one mile of open farmland.

A “Record of Decision” (ROD) was promulgated for the Site by the United States Environmental Protection Agency (U.S. EPA) in September 2003. Following U.S. EPA's final execution of the ROD, an “Administrative Order on Consent” (AOC) between the U.S. EPA and two Respondents became effective on October 7, 2004. A “Remedial Design Work Plan” (RD Work Plan) was prepared in accordance with the “Statement of Work” (SOW) presented as Attachment II to the AOC. The RD Work Plan was approved by the U.S. EPA in a letter dated June 7, 2005. The RD Work Plan was successfully implemented and CRA prepared the “Remedial Design Report” (RD Report) in February 2006, which was subsequently approved by the U.S. EPA in a letter dated May 24, 2006.

The Site had previously been characterized as a groundwater contamination Site due to the presence of certain volatile organic compounds (VOCs) at concentrations that exceeded U.S. EPA's maximum contaminant levels (MCLs). However, the results presented in the RD Report established that a discernable groundwater contaminant plume no longer existed. All of the groundwater constituents observed historically had already attenuated naturally to below drinking water standards (MCLs), and the data confirmed the temporal trend observed previously of declining VOC concentrations.

It was determined that the character of the groundwater aquifer is conducive to the natural degradation of chlorinated solvents in situ. Therefore, Monitored Natural Attenuation (MNA) was the selected remedy. In accordance with Item II, Section 3 and

Item III, Section 2c of the SOW appended to the AOC, CRA prepared a "Remedial Action Work Plan (Long Term Groundwater Monitoring Plan)" (RAWP) for the Site in August 2007.

In May 2008 the Consent Decree was executed by all parties, and it subsequently became effective on February 26, 2009. As part of the Consent Decree, the Settling Defendants agreed to implement the August 2007 RAWP. The RAWP was incorporated as Appendix B to the Consent Decree.

## **1.1 DESCRIPTION OF THE REMEDIAL ACTION**

The approved remedial action for the Site, as described in Section VI - 'Performance of the Work by Settling Defendants' of the Consent Decree, and more specifically Paragraph 12 in Section VI, was to "implement the activities required under the RAWP".

In addition, Paragraph 14b in Section VI of the Consent Decree indicates that the "scope of the remedy selected in the ROD and 2006 Memorandum" is:

- 1) MNA of contaminated groundwater until federal MCLs and Illinois primary drinking water standards for trichloroethene (TCE), tetrachloroethene (PCE), and other site related chemicals are reached;
- 2) Institutional controls to limit the use of contaminated groundwater until the cleanup is complete;
- 3) Groundwater and residential well monitoring to track the progress of MNA and to verify the remedy remains protective of human health and the environment until cleanup levels are attained; and
- 4) Contingency actions should Site conditions deteriorate.

Table 1 of the 2004 SOW listed the chemical analytes and the cleanup standards (i.e. the federal MCLs) for the Site. Table 1 of the SOW is presented in Appendix A of this RACCR.

## **1.2 GROUNDWATER MONITORING PROGRAM**

Sections 3.0 and 4.0 of the RAWP outlined the groundwater monitoring program developed in order to achieve the RA objectives. Specifically, groundwater monitoring would occur at five monitoring wells: MW-01A, MW-03, MW-103S, MW-105S, and MW-105D. Figure 1.2 presents the locations of the five monitoring wells. However, on

May 20, 2009 the U.S. EPA approved the use of monitoring wells MW-106S and MW-106D in lieu of MW-105S and MW-105D for all monitoring events required by the Consent Decree and the RAWP, since MW-105S and MW-105D had been destroyed by a local homeowner. The locations of MW-106S and MW-106D are also indicated on Figure 1.2.

The groundwater monitoring would be conducted on a quarterly basis over a one year period to determine whether there are seasonal variations in the concentrations. A review of the data would be conducted following the four quarters of monitoring to evaluate a reduction in sampling frequency and the optimal timing for future events. Monitoring would then be continued at an agreed upon frequency until receipt of written notice from the U.S. EPA stating that monitoring is no longer necessary.

CRA conducted four quarterly sampling events during the 2009-2010 reporting period: May 22, 2009; August 20, 2009; December 3, 2009; and March 4, 2010. The results of the quarterly sampling events were presented in separate letter reports and also consolidated in the "2009-2010 Monitoring Report", dated April 16, 2010. The results indicated that the cleanup objectives continued to be met. Therefore, in Section 4.0 of the "2009-2010 Monitoring Report", the Settling Defendants outlined the plan for future monitoring at the Site - two additional annual sampling events would be conducted, in the Fall of 2010 and the Fall of 2011, in order to complete three consecutive years of monitoring.

In accordance with the outlined plan, CRA conducted the two additional annual sampling events during the Fall of 2010 and the Fall of 2011, specifically on November 10, 2010 and November 17, 2011. CRA presented the results of the sampling events in letter reports dated December 23, 2010 and January 2, 2012, respectively.

During the groundwater monitoring events, the collected groundwater samples were analyzed for the U.S. EPA Target Compound List (TCL) of VOCs as set forth in Table 2.2 of the Site's "Quality Assurance Project Plan" (QAPP).

## 2.0 CHRONOLOGY OF THE REMEDIAL ACTIONS

The following list presents a chronology of the remedial actions and reporting that were completed, beginning with the date that the ROD was promulgated.

- **September 2003**, the ROD is promulgated.
- **October 7, 2004**, the AOC becomes effective. The SOW is incorporated as Attachment II of the AOC.
- **November 2004**, the “Communications Plan” is submitted to the U.S. EPA, in accordance with Section II, Subsection 2, Paragraph A of the SOW.
- **January 11, 2005**, a Certified Geologist Change Notification letter is submitted to the U.S. EPA, in accordance with the notification requirement set out in Section VII, Paragraph A of the AOC.
- **January 2005**, the RD Work Plan is submitted to the U.S. EPA.
- **March 28, 2005**, a response letter to U.S. EPA comments on the RD Work Plan is submitted to the U.S. EPA.
- **May 2005**, a revised version and then a final version of the RD Work Plan are submitted to the U.S. EPA.
- **June 7, 2005**, the RD Work Plan is approved by the U.S. EPA.
- **May to June, 2005**, CRA conducts Phase I of the U.S. EPA-approved RD studies.
- **July 15, 2005**, the “Phase I RD Studies Data Summary Report” is submitted to the U.S. EPA.
- **October 12, 2005**, the U.S. EPA approves the “Phase I RD Studies Data Summary Report” with no comments, and authorizes CRA to forego Phase II of the RD studies and instead proceed with the preparation of the final RD Report.
- **February 2006**, the RD Report is submitted to the U.S. EPA.
- **May 24, 2006**, the RD Report is approved by the U.S. EPA.
- **June 6, 2006**, an updated plume map is submitted to the U.S. EPA, in accordance with Section II, Subsection 2, Item B of the SOW.
- **August 2006**, the “Natural Attenuation Monitoring Plan” is submitted to the U.S. EPA (later revised into the RAWP).
- **February 2007**, the “Long Term Monitoring Plan” is submitted to the U.S. EPA (later revised into the RAWP).
- **August 2007**, the RAWP is submitted to the U.S. EPA.
- **August 17, 2007**, a Monitoring Well Sealing Work Plan letter is submitted to the U.S. EPA.
- **May 2008**, the Consent Decree is executed by all parties.
- **February 26, 2009**, the Consent Decree becomes effective. The RAWP is incorporated as Appendix B to the Consent Decree.

- **May 19, 2009**, CRA conducts the initial quarterly monitoring event of the groundwater monitoring program.
- **May 19 and 20, 2009**, CRA directs the sealing of the 17 monitoring wells not used in the groundwater monitoring program.
- **June 12, 2009**, a letter report detailing the sealing of the 17 monitoring wells is submitted to the U.S. EPA.
- **June 26, 2009**, a letter report of the initial quarterly monitoring event is submitted to the U.S. EPA.
- **August 20, 2009**, CRA conducts the second quarterly monitoring event of the groundwater monitoring program.
- **October 7, 2009**, the results of the second quarterly monitoring event are included in the progress report for the 3<sup>rd</sup> Quarter of 2009.
- **December 3, 2009**, CRA conducts the third quarterly monitoring event of the groundwater monitoring program.
- **January 6, 2010**, the results of the third quarterly monitoring event are included in the progress report for the 4<sup>th</sup> Quarter of 2009.
- **March 4, 2010**, CRA conducts the fourth quarterly monitoring event of the groundwater monitoring program.
- **April 7, 2010**, the results of the fourth quarterly monitoring event are included in the progress report for the 1<sup>st</sup> Quarter of 2010.
- **April 16, 2010**, the “2009-2010 Monitoring Report” is submitted to the U.S. EPA, presenting the results of the four quarterly groundwater monitoring events.
- **November 10, 2010**, CRA conducts the Fall 2010 annual sampling event of the groundwater monitoring program.
- **December 23, 2010**, the Fall 2010 Monitoring Report letter is submitted to the U.S. EPA.
- **November 17, 2011**, CRA conducts the Fall 2011 annual sampling event of the groundwater monitoring program.
- **January 2, 2012**, the Fall 2011 Monitoring Report letter is submitted to the U.S. EPA.
- **February 2, 2012**, representatives of the U.S. EPA, CRA, and the Settling Defendants attend a meeting at the U.S. EPA office in Chicago, during which an agreement was reached for the process of formally closing the project, “de-proposing” the Site, and abandoning the remaining monitoring wells.

In addition, as required by the U.S. EPA, monthly progress reports have been submitted, beginning with the October 2004 monthly report and ending with the April 2007 monthly report. The requirement was resumed, but as quarterly progress reports, beginning with the report for the 2<sup>nd</sup> Quarter of 2009. Quarterly progress reports have subsequently been submitted up to the present time.

### 3.0 DISCUSSION OF THE ANALYTICAL DATA COLLECTED DURING THE REMEDIAL ACTION

During the RD Study, as well as during the six subsequent groundwater sampling events (four quarterly events and two additional annual events) conducted as part of the groundwater monitoring program, the specific requirements for sample collection and analysis were set out by the "Field Sampling Plan" (FSP) and the QAPP that were provided as Appendices A and B, respectively, to the RD Work Plan. Sample collection was undertaken in accordance with the U.S. EPA-approved "Site Health and Safety Plan" (HASP) that was provided as Attachment C to the RD Work Plan.

The collected groundwater samples were shipped via overnight courier to the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica) of North Canton, Ohio, an Illinois Environmental Accreditation Program (ILEAP) laboratory. TestAmerica analyzed the samples for the U.S. EPA TCL VOCs using SW-846 Method 8260B.

Quality Assurance/Quality Control (QA/QC) samples were also collected, consisting of duplicate samples, rinsate blank samples, matrix spike/matrix spike duplicate (MS/MSD) samples, and trip blank samples.

All of the analytical data were validated by CRA chemists and were found to be acceptable and suitable for their intended use. A data validation memorandum was prepared for each sample set, and the memoranda were provided in the various reports presenting the sampling data.

As presented in the February 2006 RD Report: the data collected during the RD Study indicated that all of the groundwater constituents that were observed historically had attenuated naturally to below drinking water standards; confirming the temporal trend observed previously of declining VOC concentrations. Moreover, the data demonstrated that the remedial action objectives had been achieved. The conclusions of the RD Report were:

1. a definable groundwater plume and associated boundaries no longer existed; and
2. the groundwater to soil gas pathway was incomplete, making the vapor intrusion pathway not relevant to indoor air quality.

The data collected during all six subsequent groundwater sampling events (four quarterly events and two additional annual events) conducted as part of the groundwater monitoring program were consistent with the results presented in the RD Report, thereby verifying the conclusions of the RD Report.

Figure 3.1 presents the detected groundwater analytical data collected since May 2009. A comprehensive summary of the historical VOC data for the five monitoring wells (and also for former wells MW-105S and MW-105D) sampled during the groundwater monitoring program is provided in Table 3.1. These data demonstrate that the historical sampling event conducted in 2002 was the last event in which marginal exceedences of the applicable cleanup standards were detected in any groundwater samples. The analytical data collected since 2005 have continued to indicate the following: 1) a declining trend in the contaminant concentrations and, importantly, 2) that a groundwater plume and associated boundaries does not exist. Therefore, the data have continued to document that the remedy is protective of human health and the environment.

#### 4.0 SITE CLOSURE ACTIVITIES

The groundwater data collected during the groundwater monitoring program demonstrate that the remedial action has been completed in accordance with the Consent Decree and that the remedy is protective of human health and the environment.

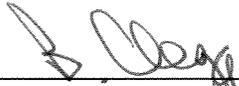
Once a Final Close Out Report is issued, the Settling Defendants, in accordance with the agreement reached with the U.S. EPA on February 2, 2012, will submit a petition for withdrawing the proposal to list the Site on the National Priorities List. This petition will be submitted in accordance with U.S. EPA guidelines issued on November 12, 2002 and 40 CFR 300.425(e).

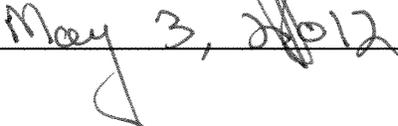
Upon concurrence from the U.S. EPA that the remedial action is complete, a Final Close Out Report has been issued, and the Settling Defendants have submitted a de-proposal petition, the only activity remaining to be completed would be the abandonment and sealing of the remaining five monitoring wells - MW-01A, MW-03, MW-103S, MW-106S, and MW-106D. To that end, the Settling Defendants would prepare and submit a work plan outlining the procedures for sealing the monitoring wells in accordance with Section 920.120 of the Illinois Water Well Construction Code (Title 77 of the Illinois Administrative Code [IAC], Part 920). Implementation of the monitoring well sealing work plan would occur upon receipt of U.S. EPA's written approval of the work plan. Upon completion of the well sealing activities, the Settling Defendants would prepare and submit a letter report describing the activities. Completed well sealing forms would be attached with the final report.

5.0 CERTIFICATION

To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Project Coordinator: Bruce C. Clegg  
Conestoga-Rovers & Associates, Inc.

Signature:  \_\_\_\_\_

Date:  \_\_\_\_\_

## 6.0 CONTACTS

### Project Coordinator / Settling Defendant's Contact

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### U.S. EPA Project Manager

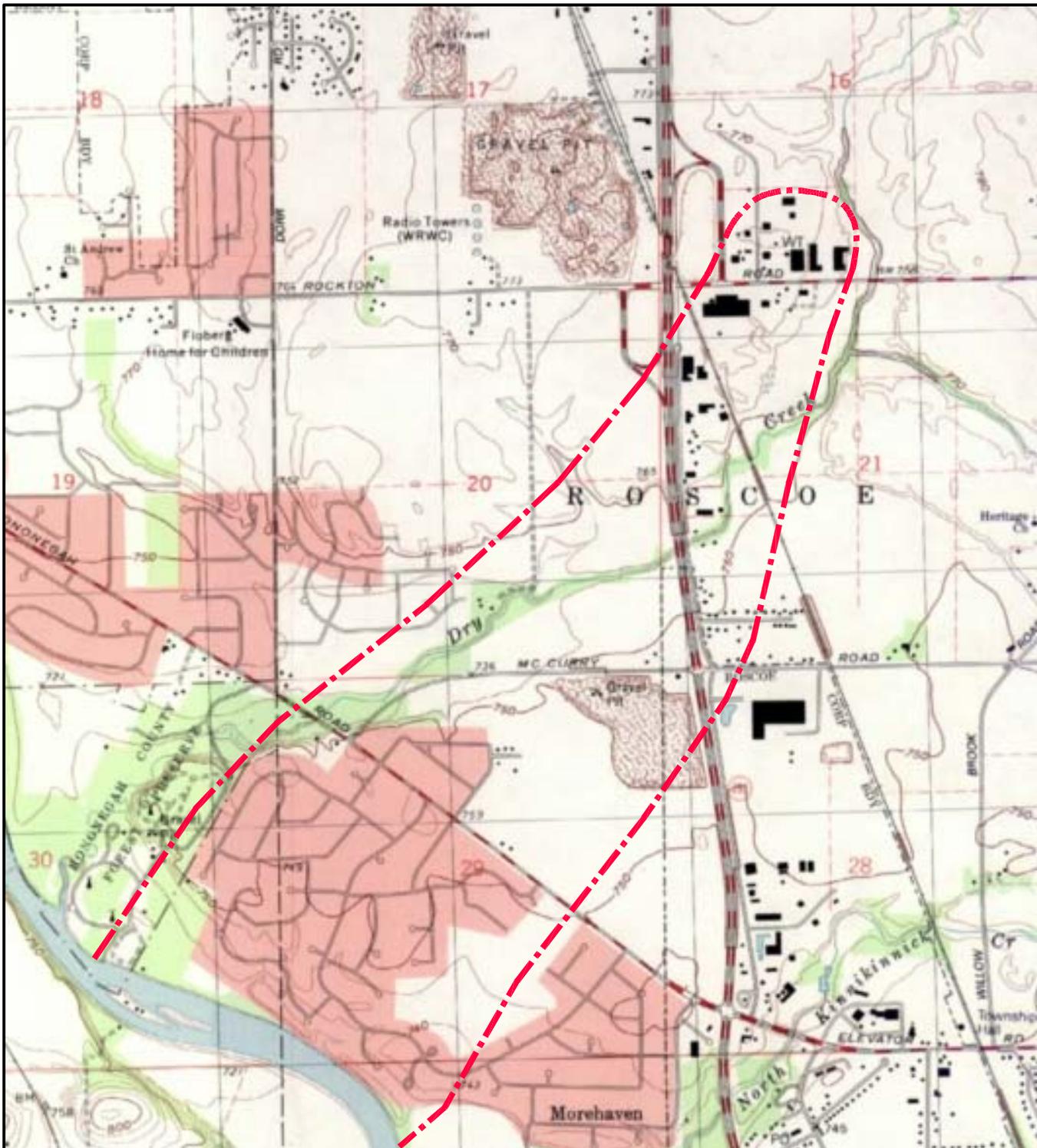
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Environmental Services  
PO Box 4009  
Rockford, Illinois 61110  
Telephone: 815-720-4000



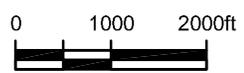
BASE SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE;  
SOUTH BELOIT, ILLINOIS 1993

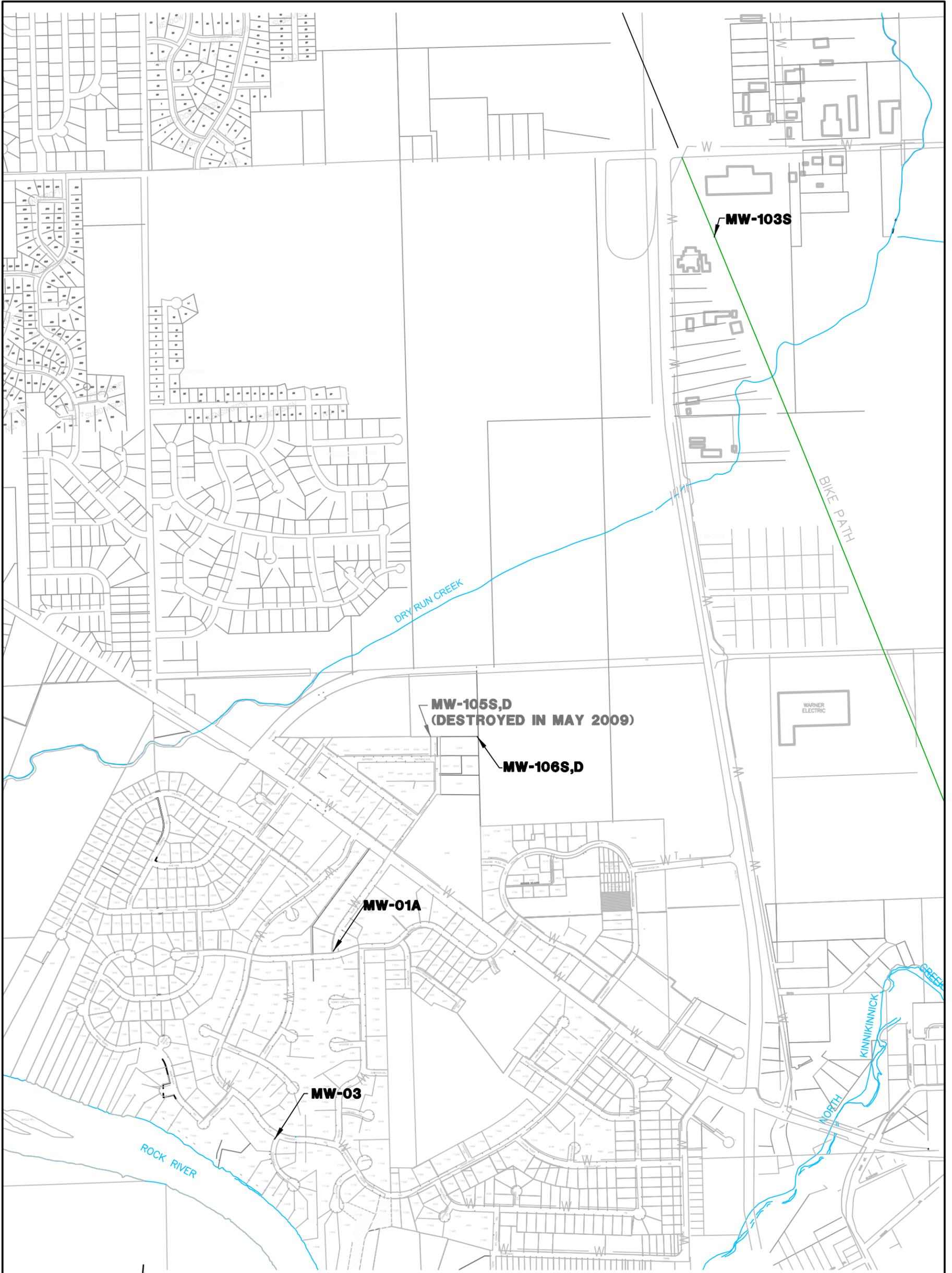
LEGEND:

 GENERAL SITE BOUNDARY, AS IDENTIFIED BY  
WESTON IN THE GDER, JULY 2003

figure 1.1

**SITE LOCATION**  
*Roscoe, Illinois*

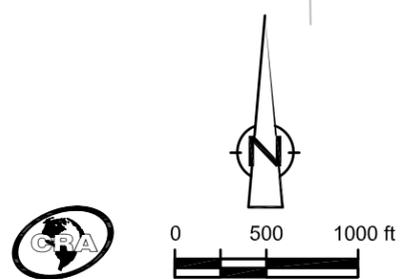




**NOTE:**

MONITORING WELLS MW-106S AND MW-106D  
 HAVE REPLACED WELLS MW-105S AND MW-105D  
 IN THE GROUNDWATER MONITORING PROGRAM.

**figure 1.2**  
**MONITORING WELL LOCATIONS**  
**GROUNDWATER MONITORING PROGRAM**  
**EVERGREEN MANOR SITE**  
*Roscoe Township, Illinois*



MW-01A	5/22/2009	
	mg/L	
1,1,1-TCA	0.007 J	

SAMPLE IDENTIFIER  
 SAMPLE DATE  
 RESULT UNIT MILLIGRAMS/LITER  
 SAMPLE RESULT  
 DETECTED ANALYTE  
 ESTIMATED VALUE  
 J  
 ND ( )  
 0.001/0.001  
 1,1,1-TCA  
 c-1,2-DCE  
 PCE  
 TCE  
 Freon 113  
 NOT DETECTED ABOVE THE VALUE IN PARENTHESES  
 SAMPLE RESULT/DUPLICATE SAMPLE RESULT  
 1,1,1-TRICHLOROETHANE  
 cis-1,2-DICHLOROETHENE  
 TETRACHLOROETHENE  
 TRICHLOROETHENE  
 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE

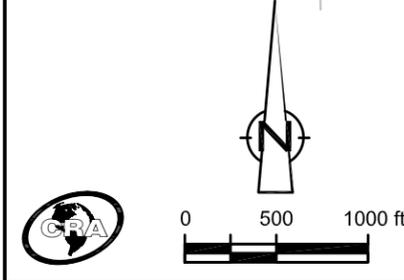
MW-103S	5/22/2009	8/20/2009	12/3/2009	3/4/2010	11/10/2010	11/17/2011
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1,1,1-TCA	0.00065 J	0.00069 J	0.00084 J	0.0016	0.0011	0.00028 J
Freon 113	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.00043 J	ND (0.001)
PCE	0.0028	0.0033	0.0028	0.0023	0.0015	0.0017

MW-106S	5/22/2009	8/20/2009	12/3/2009	3/4/2010	11/10/2010	11/17/2011
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PCE	0.00031 J	0.00038 J	0.00033 J	0.00037 J	0.00036 J	0.00030 J

MW-106D	5/22/2009	8/20/2009	12/3/2009	3/4/2010	11/10/2010	11/17/2011
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1,1,1-TCA	0.00033 J	0.00034 J	0.00034 J	0.00029 J	0.00022 J	ND (0.001)
PCE	0.00031 J	0.00031 J	0.00031 J	ND (0.001)	0.00031 J	0.00032 J

MW-01A	5/22/2009	8/20/2009	12/3/2009	3/4/2010	11/10/2010	11/17/2011
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1,1,1-TCA	0.0007 J	0.00059 J	0.00061 J	0.00058 J	0.00045 J	0.00031 J
PCE	0.0027	0.0027	0.0023	0.0025	0.0022	0.0026
TCE	0.00094 J	0.0008 J	0.00084 J	0.00083 J	0.00059 J	0.00056 J

MW-03	5/22/2009	8/20/2009	12/3/2009	3/4/2010	11/10/2010	11/17/2011
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1,1,1-TCA	0.001/0.001	0.00089 J/0.001	0.0009 J/0.00092 J	0.00091 J/0.00089 J	0.00089 J/0.00082 J	0.00063 J/0.00070 J
c-1,2-DCE	ND (0.001)/ND (0.001)	ND (0.001)/ND (0.001)	0.00021 J/ND (0.001)	ND (0.001)/ND (0.001)	ND (0.001)/ND (0.001)	ND (0.001)/ND (0.001)
PCE	0.00058 J/0.00059 J	0.00072 J/0.00075 J	0.00062 J/0.00063 J	0.00063 J/0.00065 J	0.0007 J/0.00076 J	0.00093 J/0.00096 J
TCE	0.0023/0.0023	0.0023/0.0024	0.0022/0.0023	0.0021/0.0022	0.0018/0.0018	0.0014/0.0016



NOTE:  
 MONITORING WELLS MW-106S AND MW-106D  
 HAVE REPLACED WELLS MW-105S AND MW-105D  
 IN THE GROUNDWATER MONITORING PROGRAM.

figure 3.1  
 DETECTED ANALYTICAL DATA  
 GROUNDWATER MONITORING PROGRAM  
 EVERGREEN MANOR SITE  
 Roscoe Township, Illinois

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-01A	MW-01A	MW-01A	MW-01A	MW-01A
Sample ID:			EM2-GMW1A-01/01DP	GW-052605-JK-026	GW-052209-JK-051	GW-082009-JL-61	GW-120309-JK-68
Sample Date:			4/16/2002	5/26/2005	5/22/2009	8/20/2009	12/3/2009
	<i>Units</i>	<i>Cleanup Standard<sup>1</sup></i>					
<b><i>Volatile Organic Compounds</i></b>							
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	2.4/2 <sup>4</sup>	1.6	0.70 J <sup>5</sup>	0.59 J	0.61 J
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	0.34 J/0.34 J	ND(1.0) <sup>6</sup>	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	0.19 J/0.16 J	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	1.5/1.4	0.45 J	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	1.7/1.7	2.3	2.7	2.7	2.3
Trichloroethene	ug/L	5	4.7/4.4	2.8	0.94 J	0.80 J	0.84 J
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(0.5)/ND(0.5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-01A	MW-01A	MW-01A	MW-03	MW-03
Sample ID:			GW-030410-JL-75	GW-111010-JK-82	GW-111711-JK-89	EM2-GMW3-01	GW-052605-JK-024/025
Sample Date:			3/4/2010	11/10/2010	11/17/2011	4/16/2002	5/26/2005
	Units	Cleanup Standard <sup>1</sup>					
<b>Volatile Organic Compounds</b>							
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	0.58 J	0.45 J	0.31 J	2.1	1.8/1.8
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)	ND(1.0)	ND(1.0)	0.26 J	ND(1.0)/ND(1.0)
1,1-Dichloroethene	ug/L	7	ND(1.0)	ND(1.0)	ND(1.0)	0.2 J	ND(1.0)/ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)	ND(1.0)	ND(1.0)	1.1	0.62 J/0.65 J
Tetrachloroethene	ug/L	5	2.5	2.2	2.6	0.1 J	0.29 J/0.25 J
Trichloroethene	ug/L	5	0.83 J	0.59 J	0.56 J	<b>7.2 J</b>	4.6/4.8
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.5)	ND(1.0)/ND(1.0)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-03	MW-03	MW-03	MW-03
Sample ID:			GW-052209-JK-055/056	GW-082009-JL-62/63	GW-120309-JK-69/70	GW-030410-JL-76/77
Sample Date:			5/22/2009	8/20/2009	12/3/2009	3/4/2010
	Units	Cleanup Standard <sup>1</sup>				
<b>Volatile Organic Compounds</b>						
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	1.0/1.0	0.89 J/1.0	0.90 J/0.92 J	0.91 J/0.89 J
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)
1,1-Dichloroethene	ug/L	7	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	0.21 J/ND(1.0)	ND(1.0)/ND(1.0)
Tetrachloroethene	ug/L	5	0.58 J/0.59 J	0.72 J/0.75 J	0.62 J/0.63 J	0.63 J/0.65 J
Trichloroethene	ug/L	5	2.3/2.3	2.3/2.4	2.2/2.3	2.1/2.2
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-03	MW-03	MW-103S	MW-103S	MW-103S	MW-103S	MW-103S
Sample ID:			GW-111010-JK-83/84	GW-111711-JK-90/91	G103S	G103S	G103S	MW103S	EM2-G103S-01
Sample Date:			11/10/2010	11/17/2011	3/23/1994	2/21/1995	12/1/1996	5/31/2000	4/8/2002
	Units	Cleanup Standard <sup>1</sup>							
<b>Volatile Organic Compounds</b>									
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	0.89 J/0.82 J	0.63 J/0.70 J	5.7	3.0	1.5	ND(2)	0.63
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND	ND	ND	ND(1)	ND(0.5)
1,1-Dichloroethene	ug/L	7	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND	ND	ND	ND(1)	ND(0.5)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	ND	ND	ND	ND(4)	ND(0.5)
Tetrachloroethene	ug/L	5	0.70 J/0.76 J	0.93 J/0.96 J	<u>17.0</u>	<u>43 I</u>	<u>8.4</u>	<u>9 I</u>	<u>5.9</u>
Trichloroethene	ug/L	5	1.8/1.8	1.4/1.6	ND	ND	ND	ND(1)	ND(0.5)
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(1.0)/ND(1.0)	ND(1.0)/ND(1.0)	--	--	--	2 J	ND(0.5)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-103S	MW-103S	MW-103S	MW-103S	MW-103S
Sample ID:			GW-052305-JK-004/005	GW-052209-JK-050	GW-082009-JL-57	GW-120309-JK-64	GW-030410-JL-71
Sample Date:			5/23/2005	5/22/2009	8/20/2009	12/3/2009	3/4/2010
	Units	Cleanup Standard <sup>1</sup>					
<b>Volatile Organic Compounds</b>							
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	0.42 J/0.33 J	0.65 J	0.69 J	0.84 J	1.6
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	0.94 J/0.80 J	2.8	3.3	2.8	2.3
Trichloroethene	ug/L	5	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(1.0)/ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-103S	MW-103S	MW-105S	MW-105S	MW-105S	MW-105S
Sample ID:			GW-111010-JK-78	GW-111711-JK-85	MW-105S	MW-105S	MW105S	EM2-G105S-01/01DP
Sample Date:			11/10/2010	11/17/2011	3/23/1994	2/22/1995	6/2/2000	4/8/2002
	Units	Cleanup Standard <sup>1</sup>						
<b>Volatile Organic Compounds</b>								
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	1.1	0.28 J	7.5	6.0	2 J	1.9/1.8
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)	ND(1.0)	0.7	0.7	ND(1)	0.21 J/0.19 J
1,1-Dichloroethene	ug/L	7	ND(1.0)	ND(1.0)	--	0.8	ND(1)	ND(0.5)/ND(0.5)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)	ND(1.0)	4.7	4.0	1 J	0.47 J/0.39 J
Tetrachloroethene	ug/L	5	1.5	1.7	4.1	<u>6.0</u>	3 J	3.5/3.1
Trichloroethene	ug/L	5	ND(1.0)	ND(1.0)	<u>14</u>	<u>14</u>	2 J	1.7/1.6
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	0.43 J	ND(1.0)	--	--	ND(2) UJ <sup>7</sup>	ND(0.5)/ND(0.5)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-105S	MW-105D	MW-105D	MW-105D	MW-105D	MW-105D	MW-105D
Sample ID:			GW-052505-JK-018	MW-105D	MW-105D	MW105D	MW105D-01	EM2-G105D-01	GW-052505-JK-019
Sample Date:			5/25/2005	3/23/1994	2/22/1995	6/2/2000	6/2/2000	4/8/2002	5/25/2005
	Units	Cleanup Standard <sup>1</sup>							
<b>Volatile Organic Compounds</b>									
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	1.2	8.9	9.0	2 J	3	2.2	1.4
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)	1.1	1.0	ND(1)	ND(1)	0.39 J	ND(1.0)
1,1-Dichloroethene	ug/L	7	ND(1.0)	--	1.0	ND(1)	ND(1)	ND(0.5)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)	5.7	5.0	1 J	2	1.3	ND(1.0)
Tetrachloroethene	ug/L	5	3.2	3.2	4.0	3 J	4	3.2	3.0
Trichloroethene	ug/L	5	0.82 J	<u>15</u>	<u>14</u>	2 J	3	2.8	0.94 J
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(1.0)	--	--	ND(2) UJ	--	ND(0.5)	ND(1.0)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:		<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>	<i>MW-106S</i>
Sample ID:		<i>MW-106S</i>	<i>MW-106S</i>	<i>GW-052505-JK-020</i>	<i>GW-052209-JK-054</i>	<i>GW-082009-JL-58</i>	<i>GW-120309-JK-65</i>
Sample Date:		<i>3/24/1994</i>	<i>2/22/1995</i>	<i>5/25/2005</i>	<i>5/22/2009</i>	<i>8/20/2009</i>	<i>12/3/2009</i>
	<i>Units</i>	<i>Cleanup Standard<sup>1</sup></i>					
<i>Volatile Organic Compounds</i>							
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	1.0	8.8	0.21 J	ND(1.0)	ND(1.0)
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	--	--	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	--	--	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	--	--	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	0.2	ND	0.48 J	0.31 J	0.38 J
Trichloroethene	ug/L	5	2.9	3.0	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	--	--	ND(1.0)	ND(1.0)	ND(1.0)

TABLE 3.1

**DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS**

Sample Location:			MW-106S	MW-106S	MW-106S	MW-106D	MW-106D	MW-106D
Sample ID:			GW-030410-JL-73	GW-111010-JK-80	GW-111711-JK-87	MW-106D	MW-106D	GW-052505-JK-021
Sample Date:			3/4/2010	11/10/2010	11/17/2011	3/24/1994	2/22/1995	5/25/2005
	Units	Cleanup Standard <sup>1</sup>						
<b>Volatile Organic Compounds</b>								
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	ND(1.0)	ND(1.0)	ND(1.0)	2.0	--	0.57 J
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)	ND(1.0)	ND(1.0)	--	--	ND(1.0)
1,1-Dichloroethene	ug/L	7	ND(1.0)	ND(1.0)	ND(1.0)	--	--	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)	ND(1.0)	ND(1.0)	--	0.6 J	ND(1.0)
Tetrachloroethene	ug/L	5	0.37 J	0.36 J	0.30 J	ND	0.4 J	0.40 J
Trichloroethene	ug/L	5	ND(1.0)	ND(1.0)	ND(1.0)	2.5	3.0	ND(1.0)
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(1.0)	ND(1.0)	ND(1.0)	--	--	ND(1.0)

TABLE 3.1

DETECTED GROUNDWATER ANALYTICAL DATA -  
GROUNDWATER MONITORING PROGRAM WELLS  
EVERGREEN MANOR  
ROSCOE TOWNSHIP, ILLINOIS

Sample Location:			MW-106D	MW-106D	MW-106D	MW-106D	MW-106D	MW-106D
Sample ID:			GW-052209-JK-053	GW-082009-JL-59	GW-120309-JK-66	GW-030410-JL-72	GW-111010-JK-79	GW-111711-JK-86
Sample Date:			5/22/2009	8/20/2009	12/3/2009	3/4/2010	11/10/2010	11/17/2011
	Units	Cleanup Standard <sup>1</sup>						
<b>Volatile Organic Compounds</b>								
1,1,1-Trichloroethane	ug/L <sup>2</sup>	200	0.33 J	0.34 J	0.34 J	0.29 J	0.22 J	ND(1.0)
1,1-Dichloroethane	ug/L	NE <sup>3</sup>	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	ug/L	7	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	70	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	ug/L	5	0.31 J	0.31 J	0.31 J	ND(1.0)	0.31 J	0.32 J
Trichloroethene	ug/L	5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloro- 1,2,2-trifluoroethane (Freon 113)	ug/L	NE	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

**Bold and underlined** indicates an exceedence of the applicable cleanup standard.

<sup>1</sup> Taken from Table 1 of the 2004 "Statement of Work for Remedial Design of the Remedial Action" (SOW).

<sup>2</sup> ug/L - micrograms per liter

<sup>3</sup> NE - Not established

<sup>4</sup> Sample result/Duplicate sample result

<sup>5</sup> J - estimated value

<sup>6</sup> ND( ) - not detected above the quantitation limit stated in parentheses

<sup>7</sup> UJ - estimated quantitation limit

APPENDIX A

TABLE 1 FROM THE 2004 SOW - CLEANUP  
STANDARDS FOR GROUNDWATER

**TABLE 1**  
**Cleanup Standards for Groundwater**

Chemical	Cleanup Standard (1) (ug/l)	Basis of Cleanup Standard
<i>Contaminants Detected in Groundwater and Residential Wells</i>		
1,1,1-Trichloroethane	200	MCL
1,1-Dichloroethane	NE	MCL
1,1-Dichloroethene	7	MCL
2-Butanone	NE	MCL
Acetone	NE	MCL
Benzene	5	MCL
Cis-1,2-Dichloroethene	70	MCL
Ethyl benzene	700	MCL
Freon 113	NE	MCL
m,p-xylene	10,000 (total xylene)	MCL
Methylene chloride	5	MCL
PCE	5	MCL
Toluene	1,000	MCL
TCE	5	MCL
o-Xylene	10,000 (total xylene)	MCL
<i>Other Breakdown Products of TCE and PCE That May Be Present in the Groundwater</i>		
Trans-1,2-Dichloroethene	100	MCL
Vinyl Chloride	2	MCL
MCL - Maximum Contaminant Level established under the Safe Drinking Water Act.		
(1) In addition to attaining MCLs, the groundwater must be restored to an aggregate cancer risk of $1 \times 10^{-4}$ and a noncancer hazard index less than 1.0 at all points throughout the aquifer for adult and child ingestion, inhalation and dermal contact under a residential exposure scenario.		